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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,054	10/15/2001	Nordine Cheikh	16517.256/38-21(15094)C	3580
28381	7590	03/16/2006	EXAMINER	
ARNOLD & PORTER LLP ATTN: IP DOCKETING DEPT. 555 TWELFTH STREET, N.W. WASHINGTON, DC 20004-1206			ALLEN, MARIANNE P	
			ART UNIT	PAPER NUMBER
			1647	

DATE MAILED: 03/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/976,054

Applicant(s)

CHEIKH ET AL.

Examiner

Marianne P. Allen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 12-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-17 is/are allowed.
- 6) ☒ Claim(s) 1 and 18-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's arguments filed 1/4/06 have been fully considered but they are not persuasive.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

Claims 1 and 18-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter and written description rejection.

Claims 1 and 18-19 as written require that the nucleic acid molecule encode the entirety, and not a portion, of an adenine phosphoribosyl transferase.

Claim 1 has been amended to be directed to a nucleic acid molecule that encodes an adenine phosphoribosyl transferase comprising the sequence of SEQ ID NO: 5.

Claim 18 has been amended to be directed to a nucleic acid molecule that encodes an adenine phosphoribosyl transferase which specifically hybridizes to a nucleic acid sequence that comprises SEQ ID NO: 5.

The original claims were directed to sequences encoding an adenine phosphoribosyl transferase from maize or soybean and comprised SEQ ID NO: 5. As amended, the claims

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embrace an adenine phosphoribosyl transferase from any species. This concept is not disclosed on any of pages pointed to by applicant as basis for the claim amendments (page 36, 40, and 44). As such, these claims embrace new matter.

The prior Office action presents evidence demonstrating that the nucleic acid sequence encoding soybean adenine phosphoribosyl transferase does not contain SEQ ID NO: 5.

In fact, SEQ ID NO: 5 does not encode a complete adenine phosphoribosyl transferase from any species as discussed in the prior Office action and below. SEQ ID NO: 5 is a 440 nucleotide sequence isolated from *Zea mays* or maize. At least 40 nucleotide positions are undefined (n) in this sequence. Table A on page 208 of the specification identifies SEQ ID NO: 5 as a maize adenine phosphoribosyl transferase. SEQ ID NO: 5 is disclosed as having sequence similarity to NCBI GI 726304. GI 726304 corresponds to Accession No. U22442. This sequence is from *Triticum aestivum* (bread wheat). The length of this sequence is 845 nucleotides and the coding region is identified as being from nucleotides 48-593. The sequence encodes an adenine phosphoribosyltransferase. Alignment of SEQ ID NO: 5 as provided in the prior Office action shows a query match of 28% and best local similarity of 66%. As such, the wheat adenine phosphoribosyl transferase does not include SEQ ID NO: 5.

The wheat sequence is 181 amino acids in length and the *Arabidopsis* sequence is 183 amino acids in length. In view of the nucleotide in SEQ ID NO: 5 that would result in a frame shift (see prior Office action), SEQ ID NO: 5 can only be considered to encode approximately 59 amino acids of the maize adenine phosphoribosyl transferase.

Based on the information in the specification and the lack of information about the nucleic acid sequence encoding the maize adenine phosphoribosyl transferase in the prior art, one of ordinary skill in the art would not have been able to envision the nucleic acid molecules encoding the complete enzyme.

Applicant's arguments remain unpersuasive. The specification does not adequately describe the structure of approximately 2/3 of the nucleotide sequence encoding the maize protein. It does not disclose nucleic acid sequences encoding adenine phosphoribosyl transferase from any other species that contain SEQ ID NO: 5. Of the portion that is provided, the sequence does not encode all of the completely conserved positions for this family or even the two members known at the time of the invention. (See Xing et al.) Nor does one of ordinary skill in the art know what portions of the sequence provide the structure that would make the structure identifiable as being from maize or soybean rather than another plant. In particular, the added nucleotide that would cause a frame shift that is present in SEQ ID NO: 5 makes it entirely unclear what the C-terminus of the protein would look like (and thus the nucleic acid that would encode it). Note that if SEQ ID NO: 5 is translated as presented, none of the conserved positions shown in the alignment presented in the prior Office action following the marked position are found as a completely different C-terminus would be produced. The specification does not adequately describe the claimed nucleic acid molecules encoding the complete protein for maize or any other species.

It is noted that applicant has not responded to the particular facts discussed in the prior Office action concerning SEQ ID NO: 5 and the related sequences known in the prior art and available in the later published art.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marianne P. Allen whose telephone number is 571-272-0712. The examiner can normally be reached on Monday-Thursday, 5:30 am - 1:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brenda Brumback can be reached on 571-272-0961. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marianne P. Allen

Marianne P. Allen
Primary Examiner
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3/14/06

mpa